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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,272	03/24/2004	Ryuichi Saito	503.30370CC8	4782
20457	7590	07/09/2004	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889			PHAN, TRONG Q	
			ART UNIT	PAPER NUMBER
			2818	

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/807,272	Applicant(s) SAITO ET AL.	
	Examiner TRONG PHAN	Art Unit 2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/302,953.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0704</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Drawings***

1. The drawings are objected to because the word "cashe" in Fig. 39 is misspelled. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Double Patenting

2. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

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A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

3. Claims 1-17 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-17 of copending Application No. 10/302,953. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-3 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17-18 and 20-21 of copending Application No. 5,629,888. Although the conflicting claims are not identical, they are not patentably distinct from each other because: **the ferroelectric body as recited in claims 17-18 and 20-21 of U.S. Patent No. 5,629,888, is obviously provided above the capacitive element as recited in claims 1-3 of the present invention.**

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallace et al., 5,867,417, in view of Eaton, Jr. et al., 4,914,627, cited by Applicant, and Nishimukai et al., 5,148,526.

Wallace et al., 5,867,417, discloses in Fig. 12 a computer system comprising: microprocessor 154, flash EEPROM memory package with controller 139, and input/output 157; as shown in Fig. 14, non-volatile EEPROM integrated circuit chips 141 provided in a floppy disk or a memory card and formed on a substrate, each of chips 141 having a plurality of memory cells arranged in quadrant arrays 201, 203, 205 and 207; interface circuits 209 providing connections between quadrant arrays 201, 203, 205 and 207 with controller lines 135 and 151 (see lines 53-67, column 2; lines 66-67, column 8; lines 1-9, column 9).

What is not shown in Figs. 12 and 14 of Wallace et al., 5,867,417, is the memory cell having the specific structure as recited in claim 1-3.

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Eaton, Jr. et al., 4,914,627, cited by Applicant, discloses in Fig. 5 a memory cell 100 which can be used in non-volatile mode (see lines 48-50, column 1) comprising: transistor 102 being connected in series with above capacitance divider 106; As shown in Fig. 2C, capacitance divider 106 having a ferroelectric body whose polarization axis 22 in a down direction and parallel to the inherent direction of electric field across capacitance divider 106 (see lines 35-50, column 4).

It would have been obvious under 35 USC 103(a) to one of ordinary skill in the art at the time of the invention was made to utilize the memory cell 100 in Fig. 2C and 5 of Eaton, Jr. et al., 4,914,627, cited by Applicant, for each of the memory cells in Figs. 12 and 14 of Wallace et al., 5,867,417, for the advantages of self-tracking nature and fatiguing (see lines 11-29, column 11 of Eaton, Jr. et al., 4,914,627).

What is not shown in Figs. 12 and 14 of Wallace et al., 5,867,417, which is modified by Eaton, Jr. et al., 4,914,627, cited by Applicant, is the cache memory as recited in claims 7-8 and 10.

Nishimukai et al., 5,148,526, discloses in Fig. 2 a circuit having microprocessor 1 including cache memory 11.

It would have been obvious under 35 USC 103(a) to one of ordinary skill in the art at the time of the invention was made to utilize the microprocessor 1 in Fig. 2 of Nishimukai et al., 5,148,526, for the microprocessor 154 in Figs. 12 and 14 of Wallace et al., 5,867,417, which is modified by Eaton, Jr. et al., 4,914,627, cited by Applicant, for the purpose of reducing the access time (see lines 26-30, column 2 of Nishimukai et al., 5,148,526).

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8. Claims 1-3 and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauer, 5,006,843, in view of Eaton, Jr. et al., 4,914,627, cited by Applicant, and Nishimukai et al., 5,148,526.

Hauer, 5,006,843, discloses in Fig. 4 an engine control system for automotive vehicle comprising:

microprocessor 31, input/output data bus 36, data memory 33 of ferroelectric memory (see lines 63-68, column 6; lines 1-4, column 7).

What is shown in Fig. 4 of Hauer, 5,006,843, is the memory cell having the specific structure as recited in claims 1-3.

Eaton, Jr. et al., 4,914,627, cited by Applicant, discloses in Fig. 5 a memory cell 100 which can be used in non-volatile mode (see lines 48-50, column 1) comprising: transistor 102 being connected in series with above capacitance divider 106; As shown in Fig. 2C, capacitance divider 106 having a ferroelectric body whose polarization axis 22 in a down direction and parallel to the inherent direction of electric field across capacitance divider 106 (see lines 35-50, column 4).

It would have been obvious under 35 USC 103(a) to one of ordinary skill in the art at the time of the invention was made to utilize the memory cell 100 in Figs. 2C and 5 of Eaton, Jr. et al., 4,914,627, cited by Applicant, for the data ferroelectric memory 33 in Fig. 4 of Hauer, 5,006,843, for the advantages of self-tracking nature and fatiguing (see lines 11-29, column 11 of Eaton, Jr. et al., 4,914,627).

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What is not shown in Fig. 4 of Hauer, 5,006,843, which is modified by Figs. 2C and 5 of Eaton, Jr. et al., 4,914,627, cited by Applicant, is the cache memory as recited in claim 12.

Nishimukai et al., 5,148,526, discloses in Fig. 2 a circuit having microprocessor 1 including cache memory 11.

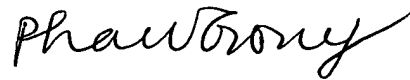
It would have been obvious under 35 USC 103(a) to one of ordinary skill in the art at the time of the invention was made to utilize the microprocessor 1 in Fig. 2 of Nishimukai et al., 5,148,526, for the microprocessor 31 in Fig. 4 of Hauer, 5,006,843, 5,867,417, which is modified by Figs. 2C and 5 Eaton, Jr. et al., 4,914,627, cited by Applicant, for the purpose of reducing the access time (see lines 26-30, column 2 of Nishimukai et al., 5,148,526).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRONG PHAN whose telephone number is (571) 272-1794. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Phan Trong', with a stylized flourish at the end.

**TRONG PHAN
PRIMARY EXAMINER**